

Taking Advantage of the Carbon Markets Agriculture's Opportunity with Cap and Trade

Agricultural Renewable Energy Forum

Hudson Valley AgriBusiness Development Corporation

Holiday Inn, Kingston, NY – December 3, 2008

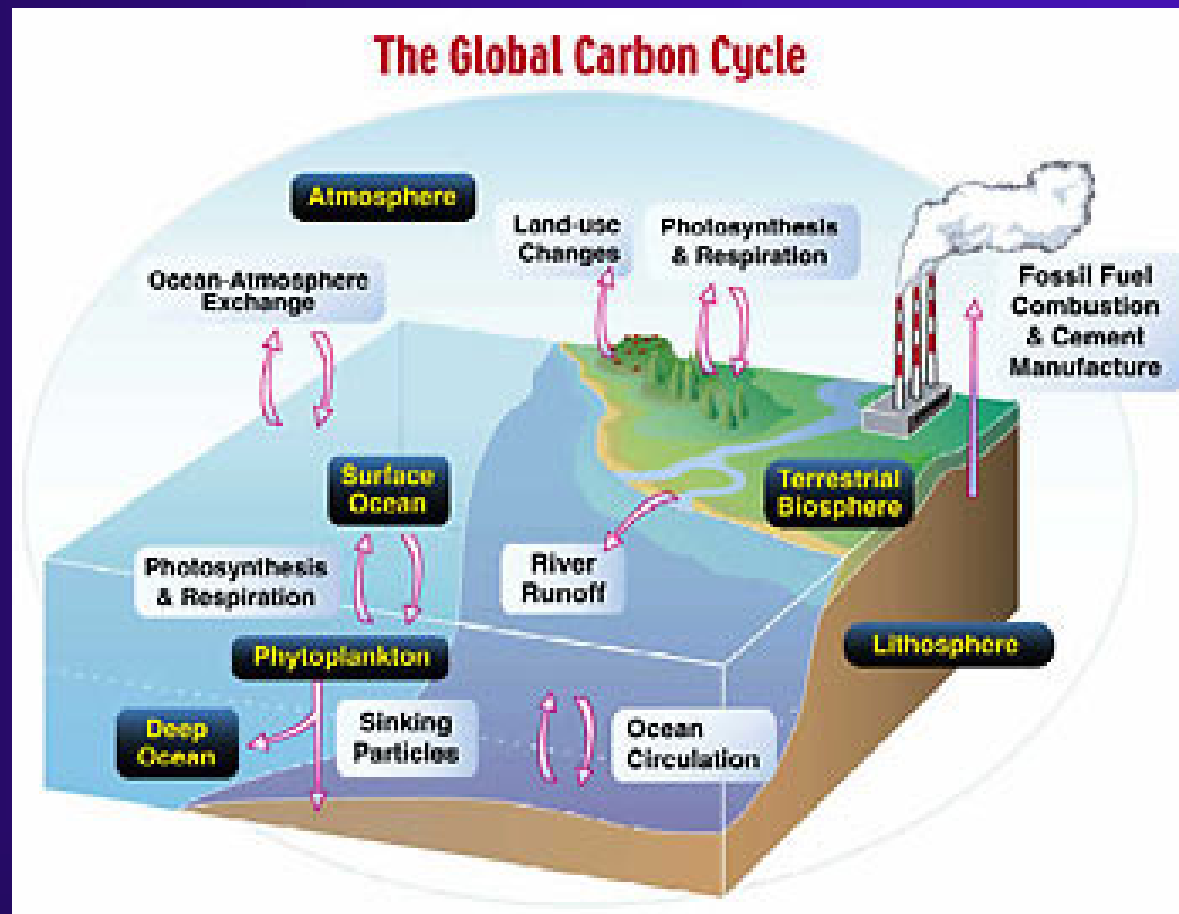
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Format

- ❑ **General Overview – Concepts & commonly used terms**
- ❑ **Sources – Agriculture's Contribution**
- ❑ **Cap and Trade**
- ❑ **Trading Schemes**
- ❑ **Offsets – Agricultural Opportunities**
- ❑ **Risks**



What's the problem ?





Greenhouse Gases (GHG's)

- ❑ Carbon Dioxide (CO₂)
- ❑ Methane (CH₄)
- ❑ Nitrous Oxide (N₂O)
- ❑ Sulfur Hexafluoride (SF₆)
- ❑ Numerous Hydrofluorocarbons
- ❑ Numerous Perfluorocarbons

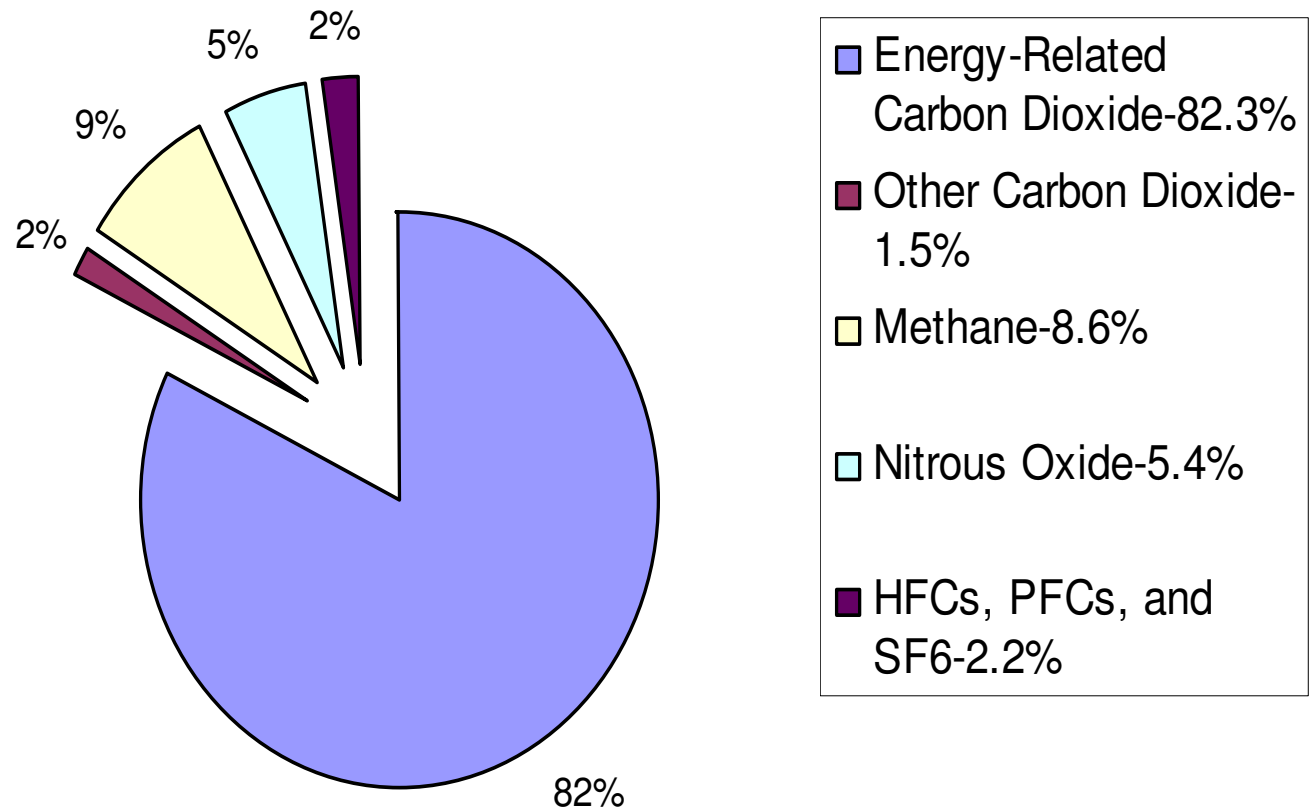
Global Warming Potential (GWP)

- Carbon Dioxide – CO_2 = 1
- Methane – CH_4 = 23
- Nitrous Oxide – N_2O = 296
- Sulfur Hexafluoride – SF_6 = 22,200
- Carbon Dioxide Equivalent is written as CO_2e





U.S. Anthropogenic GHG Emissions by Gas 2006 (MMT of CO₂e) MMT CO₂e



Source: Energy Information Administration 2006



Agriculture's Contribution

2006 Data	MMT CO ₂ e	% of Total
Total U.S. Emissions	7054.2	
Direct Emissions from Agriculture	454.1	6.4%

**Inventory of U.S. GHG Emissions and
Sinks 1990-2006 – EPA**

Emissions from Agriculture methane – CH₄

	MMT of CO ₂ e	% of CH ₄	% of Total
Enteric Fermentation	126.2	22.7%	1.8%
Manure Management	41.4	7.4%	0.58%
Rice Cultivation	5.9	1.1%	0.01%
Field Burning	0.8	0.01%	0.01%
Total CH ₄ Emissions Agriculture	174.4	31.4%	2.5%
Total CH ₄ Emissions	555.3		7.9%



Emissions from Agriculture nitrous oxide – N₂O

	MMT of CO ₂ e	% of N ₂ O	% of Total
Agricultural Soil Management	265.0	72.0%	3.8%
Manure	14.3	3.9%	0.2%



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